

# IOWA STATE UNIVERSITY

*Office of the Vice President for Research and Economic Development*

*Office of the Vice President for Extension and Outreach*

## Expanding the University's Role in Economic Development

**Sharron S. Quisenberry**

**Vice President for Research  
and Economic Development**

**Cathann Kress**

**Vice President for Extension  
and Outreach**

**Joint Economic Development  
Appropriations Subcommittee**

**February 1, 2012**

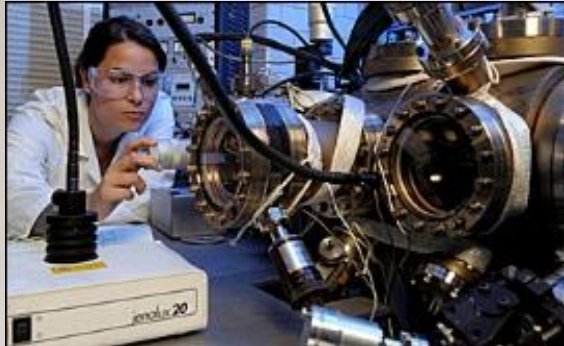


# Need for Sustained Economic Development Funds

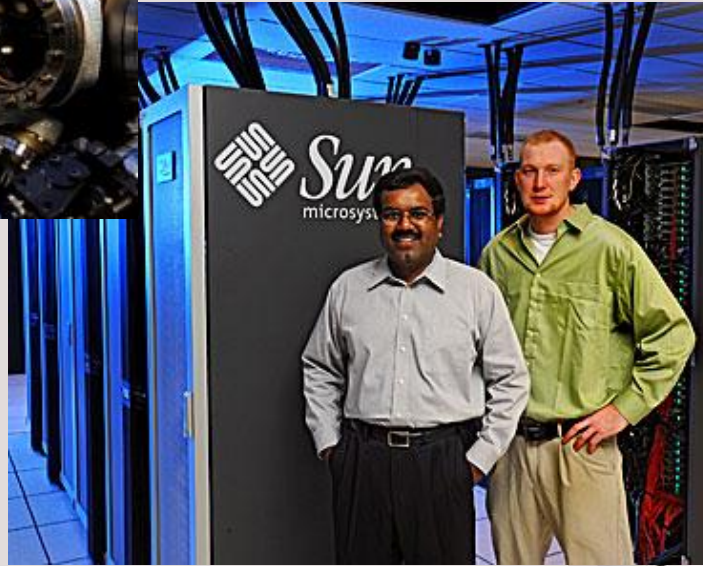
## FY2013 Requests (\$6.4 M)

- ISU Economic Development/Entrepreneurial activities
  - Economic Development (former GIVF) - \$1.0 M
  - Research Park - \$122K
  - IPRT - \$1.36 M
  - Extension/Outreach (CIRAS - \$1.5 M; CED - \$1.1 M; ARN Economics - \$465K)
  - SBDC - \$936K
- ISU Partnership – continue to seek additional funds to enhance economic development (for ex., i6 Green Challenge Grant – ISU and the state).
- Lack of baseline funding will reduce ISU's efforts to enhance economic development in Iowa

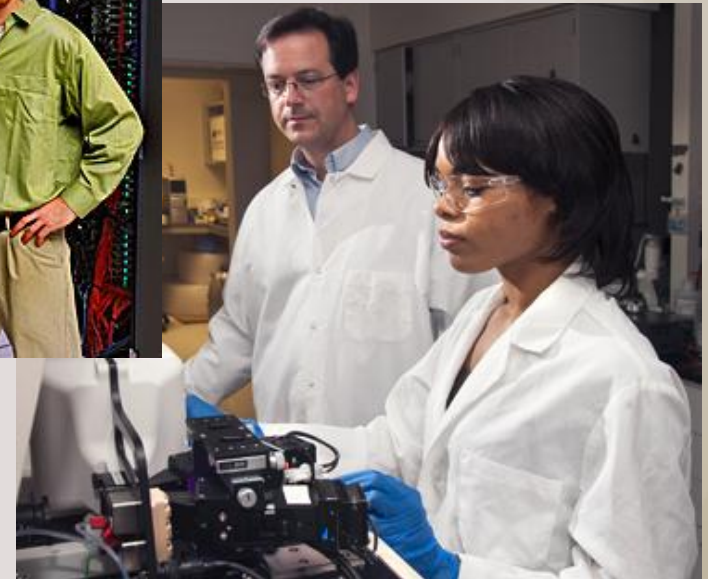
# How to Create an Innovation Economy



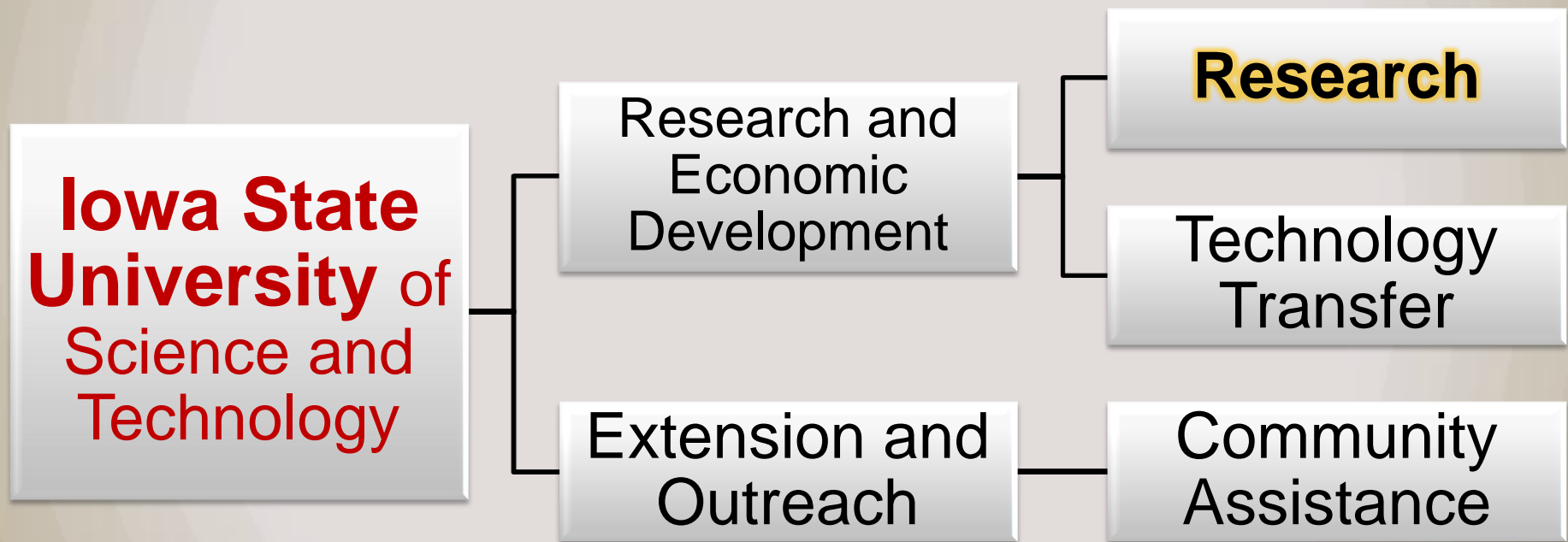
**Research** is the *ENGINE*



Adding **Innovation** and  
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**Commercialization**

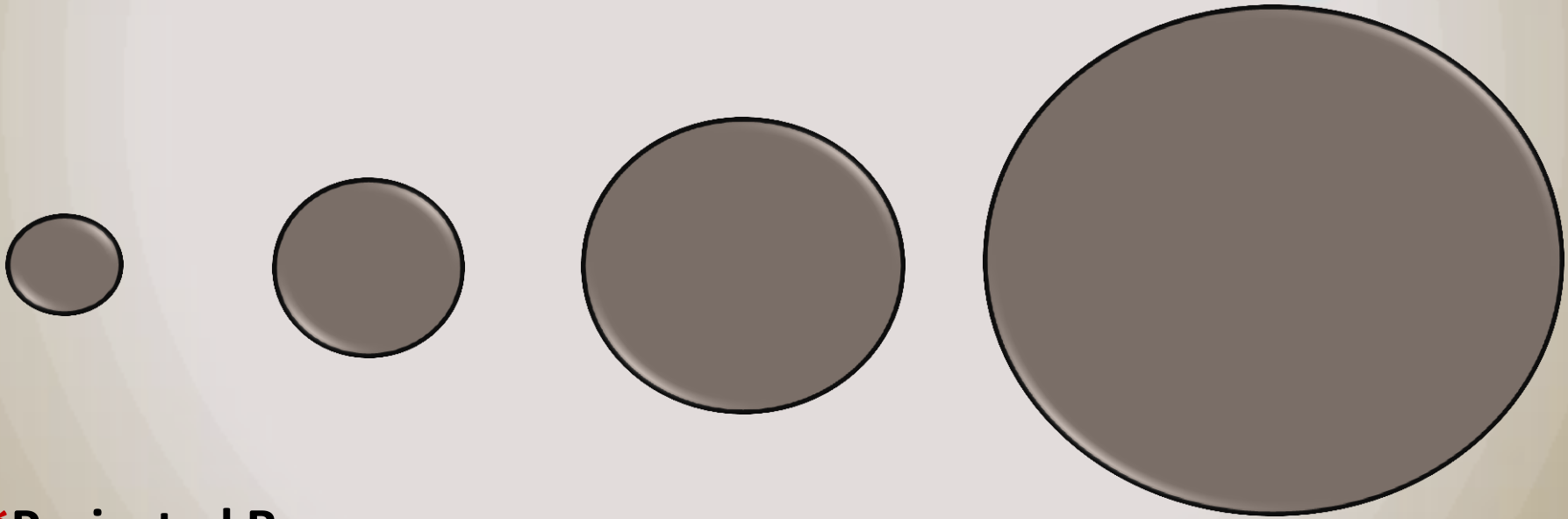


# Strengthening Iowa's Economy



# Research Enterprise - Investment in Iowa

1980 - 89 → 1990 - 99 → 2000 - 09 → ~~2010 - 19~~ **2010 - 19**  
\$556 M      \$1.6 B      \$2.6 B      \$4.5 B\*      \$7-8 B



**\*Projected Revenue**



# Integrating Science and Creative Inquiry

## *ISU's Research Enterprise Plan*

### Integrated, Innovative Health

- Food, health, nutrition, & safety

### Biorenewables

- Products & energy

### New Technologies

- Materials to systems

### Environment

- Climate change to ecosystem degradation

Behavioral  
and Social  
Sciences

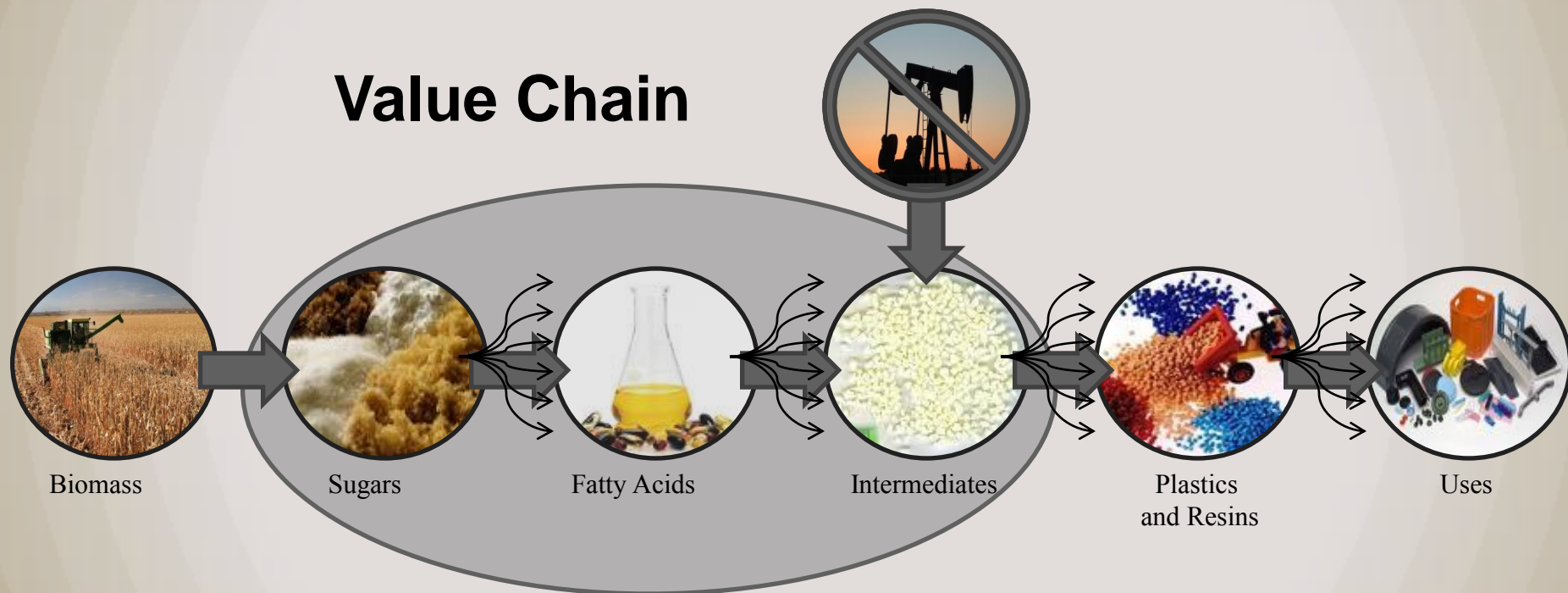
Social Action

Quality  
of  
Life

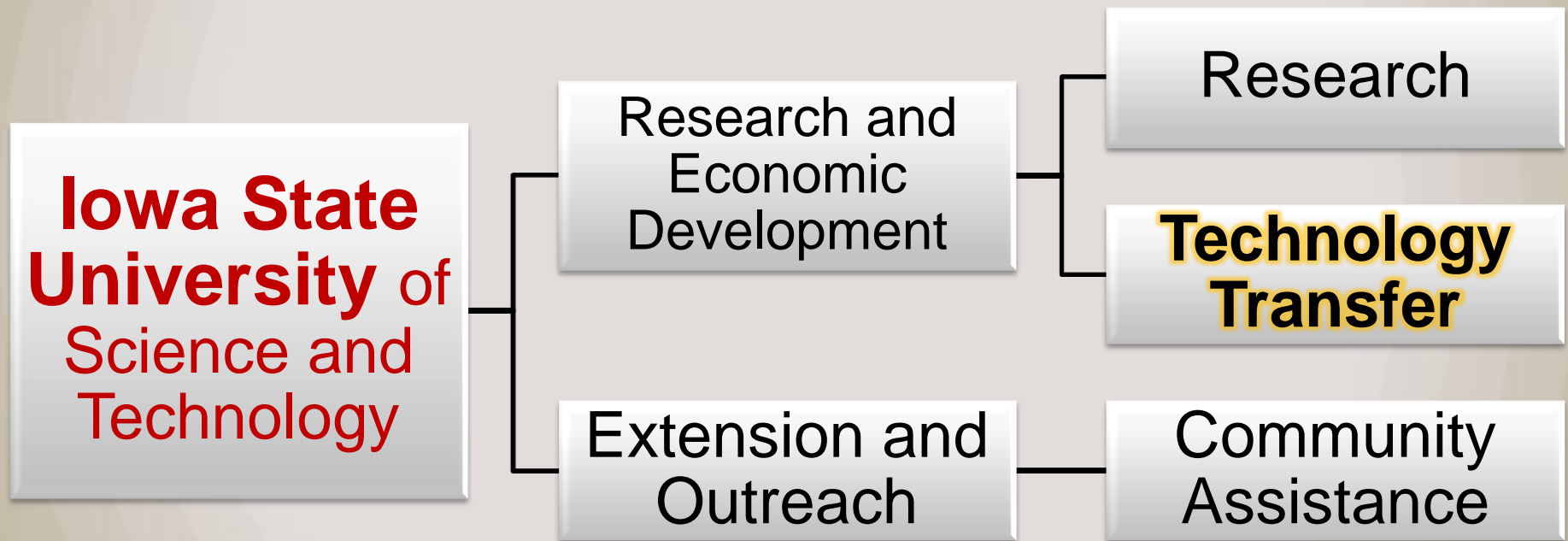
# Research Example - CBiRC

NSF Engineering Research Center for Biorenewable Chemicals

## Value Chain



# Strengthening Iowa's Economy





# Technology Transfer

- **Existing industry**
  - Technical assistance
  - Know-how
  - License opportunities
  - Service facilities
- **New company formation**
  - Business assistance
  - All of the above

# The ReWall Company



## **David Phillips**

Chief Executive Officer,  
Founder, Sustainable  
Building Entrepreneur

The ReWall Company uses a proven European technology to recycle polyethylene-coated cups, cartons, and their components into building materials. U.S. ReWall products are manufactured in Des Moines, Iowa, and distributed nationally.

ReWall helps recycle some of the 2 million tons of polyethylene-coated cartons and cups that enter landfills every year. The manufacturing process is environmentally friendly. ReWall is 100% recycled.

# New Initiatives in FY2012

## Expanding Iowa State's Role in Economic Development

### **Innovate Iowa Proof of Concept Initiative**

- Increases technology transfer and reduces commercialization time
- Provides single, visible interface and coordinated communication

### **i6 Green Challenge Grant (Dept. Commerce)**

- ISU–State of Iowa partnership to accelerate green technologies
- Capitalizes on unique ISU infrastructure and facilities (for ex., Bioeconomy Institute, Center for BioRenewable Chemicals, BioCentury Research Farm)

### **Reinvigorated Prospect Development and Accelerated Start-Up**

- Strategic partners: ISU Research Foundation, Research Park, and Pappajohn Center
- Engages faculty, staff, and students in entrepreneurial start-ups

# Iowa Innovation Corporation



## **Jack Harris**

President and CEO,  
Retired Rockwell Collins  
Executive

The Iowa Innovation Corp. was created to push development of innovative products and companies. The new nonprofit is the operating arm of the Iowa Innovation Council, a public board focused on developing an “ecosystem” in the state that helps young companies get up and running.

# Proof of Concept Initiative

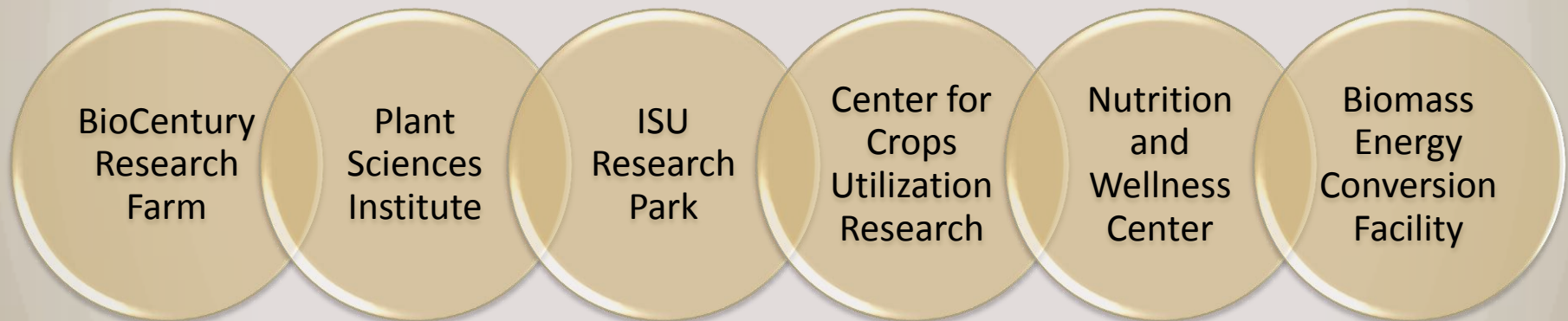
<b>GIVF Program</b>	<b>i6 Green Challenge Grant</b>	<b>ISURF Tech Fund</b>	<b>IPRT Company Assistance</b>	<b>Pappajohn Center/ ISU Research Park</b>	<b>Incubators</b>
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Bringing together resources to provide a comprehensive program for business development, technology development, and commercialization.



# Technology Transfer - Incubator Network

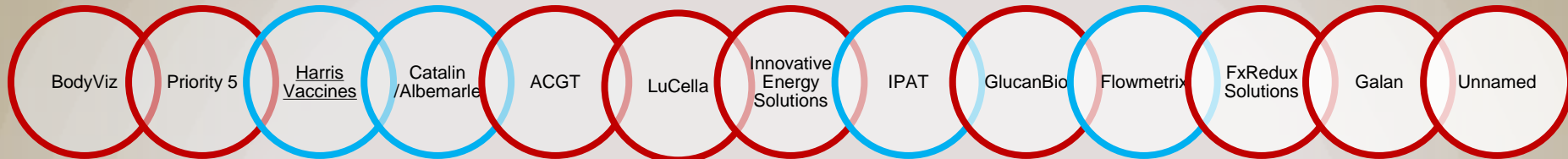
*A coordinated network of incubation and pilot-scale facilities at Iowa State University...*



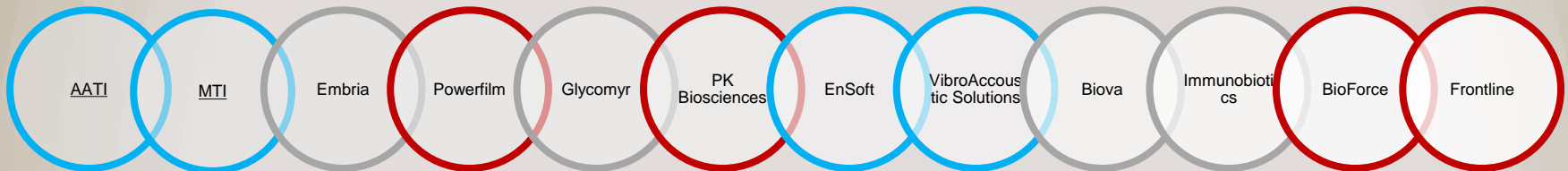
**“National USDA and DOE Laboratories”**

# Economic Development Funded Projects (GIVF)

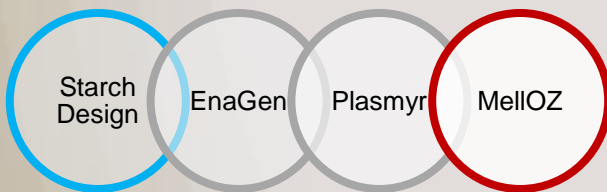
## Companies started with GIVF research funds



## Other Start-up companies with GIVF projects



## Startups that were started and/or assisted by GIVF but failed or are suspended pending investment



- \$8.0M in research funding (~\$1M in still-active research projects)
- More than 50 companies have participated, including 29 startups
- 15 companies formed in 6 years
- Licensed (or in process) ISURF Intellectual Property (underlined are generating licensing revenue)
- Based on ISU Research

# Harrisvaccines



What is Harrisvaccines?

## **Hank Harris**

Founder, Harrisvaccines  
Professor, Animal Science  
Serial Entrepreneur

Harrisvaccines, Inc. is focused on developing vaccines for several of the most economically devastating viral diseases affecting swine, cattle, and farmed shrimp.

# Priority 5

## PRIORITY 5

**Allen Bierbaum**

Vice President, Technology  
Founder, Infiscape  
Entrepreneur

Priority 5 is at the forefront of building critical infrastructure visualization tools that include interactive dashboards and analytical frameworks. Those tools aggregate critical asset and key resource (CI/KR) information from disparate sources, and dynamically assess, analyze, and manage the multidimensional impacts of various disruption scenarios.

Priority 5 purchased Infiscape in 2005.

# Economic Development Technology Transfer Impacts

- **Created a cloud-based software solution for publicly traded companies in reporting to Securities and Exchange**
- 250 new jobs over 4 years
- \$170M direct impact over 5 years (\$675M indirect)

**Webfilings  
Research Park**



- **Building a cellulosic ethanol production facility in Nevada, IA**
- \$275.5M investment
- 60 employees
- \$30M in annual economic impact for Iowa

**Dupont  
Danisco**





# Economic Development Technology Transfer

## Average Annual Outcomes

- Programs in nearly every IA county
- Employment, new & retained jobs for over 8,000

Outcomes



- \$375M financial impact
- Workshops & client assistance to 4,000+

Outcomes



# Economic Development Technology Transfer

## Average Annual Outcomes

- Entrepreneurial education to 5,000+ for 2008-2010
- ISU collaboration with 5,000+ companies (majority with 100 or fewer employees)

Outcomes



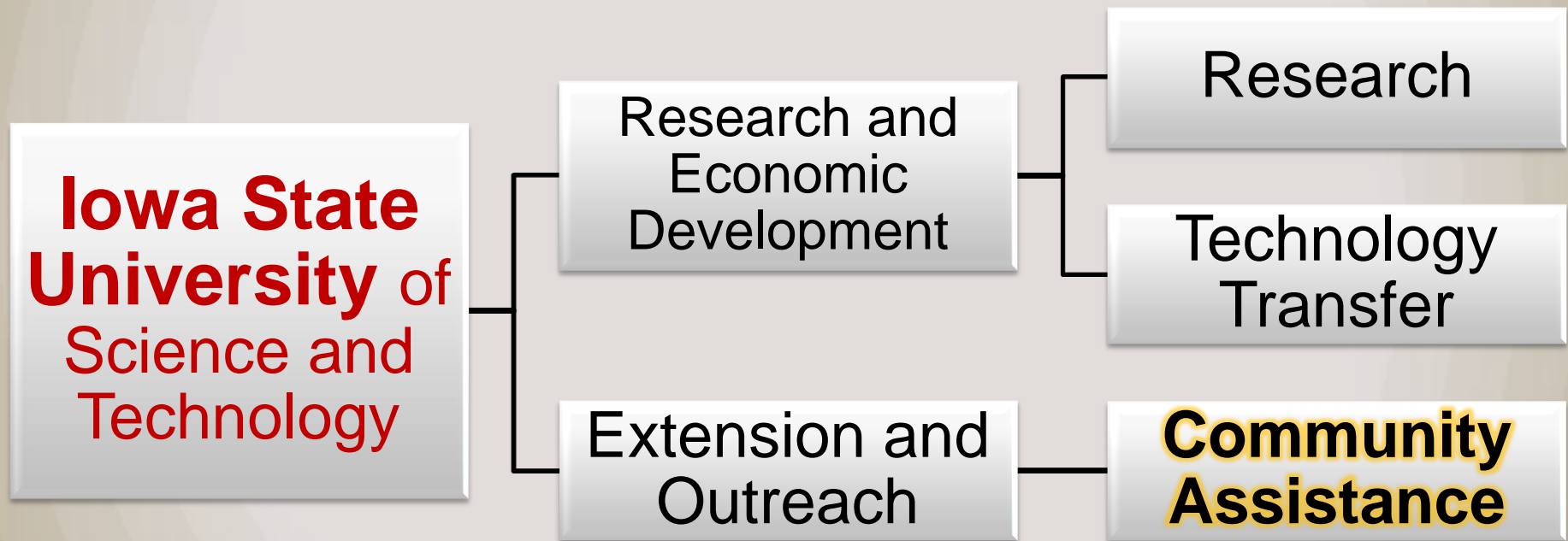
- Assisted **2,695 clients** with **\$42M+** in new **capital** raised
- Created or retained **1,800 jobs**.
- Assisted in start of **179 new small businesses**

SBDC\*



\*Loses \$105K in GIVF funds at the end of FY2012

# Strengthening Iowa's Economy



# Ames Economic Development Commission



**Dan Culhane**

President & CEO, AEDC

President, Ames Chamber

The Ames Economic Development Commission organizes and promotes sound economic growth in Ames and central Iowa by stimulating the expansion of existing industry, attracting new enterprises, and assuring a favorable community climate for new ideas and economic growth.

# Iowa State University Extension and Outreach

**IOWA STATE UNIVERSITY**  
Extension and Outreach  
**Healthy People. Environments. Economies.**

**Cathann Kress**  
Vice President for  
Extension and Outreach

Iowa State University Extension and Outreach is part of the Cooperative Extension Service – one of the nation's largest providers of scientific research-based information and education. It's a network of colleges, universities, and the U.S. Department of Agriculture, serving communities and counties across America



# Hagie Manufacturing



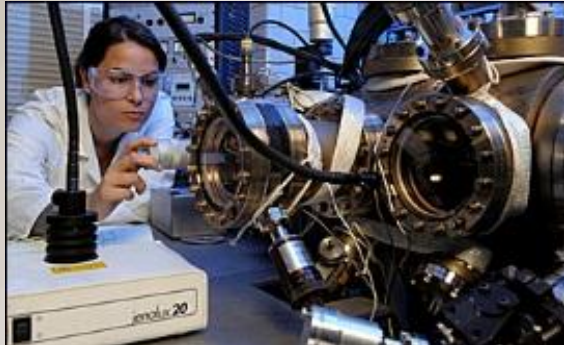
**Alan Hagie**  
President,  
Third-generation  
Entrepreneur

Hagie Manufacturing Company is the world's oldest manufacturer of self-propelled crop sprayers, introducing the world's first sprayer in 1947 and beginning worldwide sales in 1955. In the years that followed, Hagie Manufacturing Company has continued to be an innovator in the industry with items such as front-mounted booms, hydrostatic drives and hydraulically-adjustable booms.

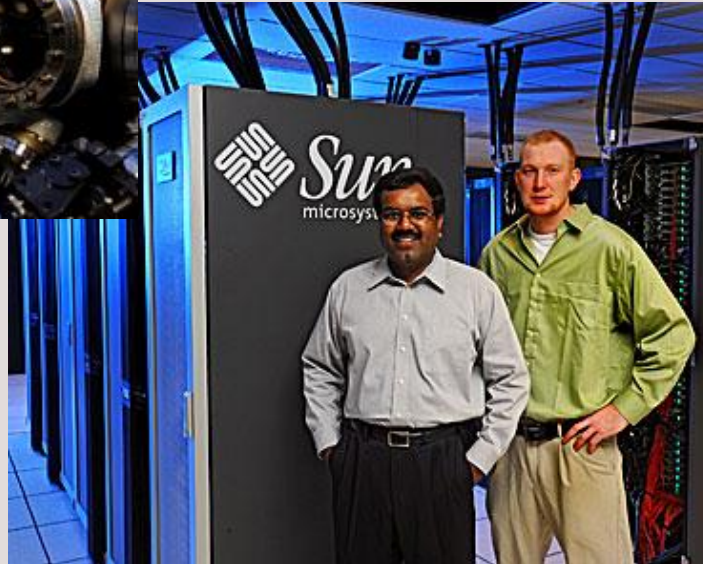
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